

6E 6052**6E 6052**

B.Tech. VI Semester (Main) Examination, May-June 2015
Electronics And Communication Engg.
6EC2A Microprocessors

Time : 3 Hours

Maximum Marks : 80
Min. Passing Marks : 24

Instructions to Candidates:

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Unit - I

1. Explain pin description and signal flow diagram of 8085. Explain all the signals used for 8085 in brief (16)

OR

1. a) Explain the programming model of microprocessors with the help of suitable block diagram (8)
 b) Explain the types of memory used in microprocessors (8)

Unit - II

2. a) Write an assembly language program to find largest and smallest numbers out of ten 8 bit integers stored at 3000H onwards. Store the result at 3050H and 3051H. Also draw flow chart for this program (12)
 b) Explain MVI and LXI instructions using suitable example (4)

OR

2. a) Write an assembly language program to multiply two 8-bit numbers stored in register-B and register-C. The 16-bit result should be stored in DE register pair
 B → AZH, C → OBH (8)

- b) Write short notes on any two (8)
- Instruction size
 - Op code format
 - flow chart

Unit - III

3. a) Why time delay is required for microprocessor classified techniques? calculate the maximum time delay for using one 8-bit register technique. The clock frequency of 8085 microprocessor is 3 MHz (12)
- b) Explain the use of counter in microprocessor programming (4)

OR

3. a) Explain BCD to binary code conversion technique (4)
- b) Draw machine cycle timing diagram for the instruction given:- STA 4050H, memory address starting at 2052H and Hex code for SIA in 32H (12)

Unit - IV

4. a) Classify the type of interrupts used for 8085 microprocessor. Explain each interrupt with its functioning in brief. (10)
- b) Explain SIM and RIM instruction operations. (6)

OR

4. a) Draw schematic diagram for serial input/output interfacing. Also explain synchronous and asynchronous transmission (8)
- b) Explain serial Input/Output standards in details. (8)

Unit - V

5. a) Draw and explain the block diagram of 8255 programmable peripheral interface. (8)
- b) Draw the block diagram of 8259 programmable interrupt controller and briefly explain each block. (8)

OR

5. a) Draw and explain the block diagram of 8279 keyboard/display interface (10)
- b) Briefly describe the various operating modes of 8254 programmable interval timer. (6)